INDUCIBLE ALPHAVIRAL GENE EXPRESSION SYSTEM

Abstract

The present invention provides novel expression vectors which permit tight regulation of gene expression in eucaryotic cells. More specifically, the invention provides DNA vectors comprising nucleotide sequences that are transcribed to form RNA molecules which are then replicated by a temperature-sensitive replicase to form additional RNA molecules. The RNA molecules produced by replication contain a nucleotide sequence which may be translated to produce a protein of interest or which encode one or more untranslated RNA molecules. Also provided are methods for producing heterologous proteins and untranslated RNA molecules. Further provided are methods for administering heterologous proteins and untranslated RNA molecules to individuals. In addition, pharmaceutical compositions are provided comprising the DNA and RNA molecules of the invention and a pharmaceutically acceptable carrier.